File Encryption

The purpose of this assignment is to practice:

- using arrays
- reading from a file
- processing strings
- resizing arrays
- *EDITING AND REVISING YOUR WORK*

Write a program called FileEncryption.java. Your program should do the following:

1. Read strings from a file called sample.dat and store in an array.
2. Once the array is populated, iterate over the array and encrypt each word. The encryption algorithm is given below.
3. On a single line, output the original word, and either
    a. The encrypted version of the word, or
    b. The word UNCHANGED, if the word is not changed by the encryption
4. Output a final line that shows the number of words that were changed and the number of words that were not changed by the encryption.

Caveats

1. You may not use the java `ArrayList` structure
2. You may not use `System.arraycopy`
3. Formatting counts

Encrypt each word as follows:

1. Encryption process begins at the first letter of the word and continues from left to right
2. If two consecutive letters consist of "A" followed by a letter that is not an "A", then the two letters are swapped in the resulting String
3. Once the letters in the two adjacent positions have been swapped, neither of those two positions can be involved in a future swap

Sample run

The input file containing the following:

```
AVACADO CHICKEN BACON AARDVARK NAAN A PI
```

Should produce the following output:

```
run:
AVACADO         VACADAO
CHICKEN         UNCHANGED
BACON           BCAON
AARDVARK        ARADVRAK
NAAN            NANA
A               UNCHANGED
PI              UNCHANGED
4 words were changed by the encryption and 3 words were not changed.
BUILD SUCCESSFUL (total time: 0 seconds)
```